



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,341	03/12/2004	Curt Nelson	200311972	1930

22879 7590 09/16/2005

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

SARKAR, ASOK K

ART UNIT PAPER NUMBER

2891

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/801,341

Applicant(s)

NELSON ET AL.

Examiner

Asok K. Sarkar

Art Unit

2891

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 32-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/12/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I claims 1 - 31 in the reply filed on August 29, 2005 is acknowledged.
2. Claims 32 – 51 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II claims, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 29, 2005.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 19 and 23 – 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin, US 5,188,902.

Regarding claims 1, 2, 11 and 23, Lin teaches a transparent thin film electronic device, formed substantially by a process comprising:

- forming one or more material layers on a substrate;
- selectively modifying at least a portion of said one or more material layers, and
- removing at least another portion of said one or more material layers, wherein said at least another portion comprises one or more non – annealed portions of

Art Unit: 2891

said one or more material layers in between column 4, line 63 and column 5, line 18.

Regarding claims 3, 12 and 24, Lin teaches removing at least another portion comprises removing material that is substantially unmodified in material properties in column 5, line 8 – line 67.

Regarding claims 4, 5, 13, 14, 25 and 26, Lin teaches one or more material layers are formed substantially by a process comprising one or more deposition processes such as spin coating in column 5, lines 2 – 5.

Regarding claims 6, 15 and 27, Lin teaches material layer substantially comprises a sol – gel in column 2, line 46.

Regarding claims 7, 16 and 28, Lin teaches a process substantially comprising one or more laser annealing processes applied to at least a portion of one or more material layers in column 2, lines 33 – 42.

Regarding claims 8, 17 and 29, Lin teaches at least one of laser annealing processes comprises localized annealing using a pulsed excimer laser in column 5, lines 8 – 11.

Regarding claims 9, 18 and 30, Lin teaches at least one or more material layers are based at least in part on position on the substrate because it is inherent in his laser writing process.

Regarding claims 10, 19 and 31, Lin teaches material properties comprise at least one of: conductivity, consolidation, and crystallinity in column 5, lines 20 – 67.

Art Unit: 2891

Regarding claim 20, Lin teaches forming one or more films in column 5, lines 1 – 7.

5. Claims 1 – 19 and 23 – 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Russel, US 5,310,990; Varshney, US 5,626,670 and Kamisawa, US 5,627,013.

Limitations of these claims are taught by these prior art references as they are similar to the teachings of Lin as described earlier.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

Art Unit: 2891

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin, US 5,188,902 in view of Peng, US 2002/0016075.

Regarding these claims Lin fails to teach forming thin films comprising indium tin oxide (ITO) for a transparent transistor.

Peng teaches a laser patterning process very similar to that of Lin for ITO layer that is used for LCD devices that inherently comprises a transparent transistor in paragraphs 4 and 5 for the benefit of minimizing production cost in paragraph 7.

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify Lin and apply the process for patterning transparent ITO layer for the benefit of minimizing production cost as taught by Peng in paragraph 7.

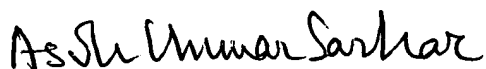
Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asok K. Sarkar whose telephone number is 571 272 1970. The examiner can normally be reached on Monday - Friday (8 AM- 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William B. Baumeister can be reached on 571 272 1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2891

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Asok K. Sarkar
September 12, 2005

Primary Examiner